"SOCIAL DESIRABILITY IN THE RURAL HIGH SCHOOL"

THE UNIVERSITY OF ALBERTA

SOCIAL DESIRABILITY IN THE RURAL HIGH SCHOOL

A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE
OF MASTER OF EDUCATION

DIVISION OF EDUCATIONAL PSYCHOLOGY

by

ROSS EUGENE TRAUB

EDMONTON, ALBERTA
MAY, 1961

SUMMARY

SOCIAL DESIRABILITY IN THE RURAL HIGH SCHOOL

Four psychometric hypotheses concerning the nature of social desirability in a rural high school setting were tested using a questionnaire based on Murray's needs. The first hypothesis, that a general factor of social desirabilityexists in adolescence, was accepted on the basis of the number of significant positive correlations found in the matrices of intercorrelations of questionnaire variables and of the size of the first centroid factor. By the same criteria the second hypothesis, that the generality of this factor increases with age, was also accepted but the third hypothesis, that the factor is more general in girls than boys, was rejected. A fourth hypothesis, that 'points of view' about social desirability are different in adolescents than in manifestly disturbed hospital patients, was accepted after an analysis of the significant composite needs of the oblimax rotations of the centroid factors obtained from this study were compared with those obtained by a preceding study

by Messick (1960).

Two theories were advanced to integrate psychologically the psychometric knowledge related to the social desirability concept into a meaningful theory of response set.

ACKNOWLEDGMENTS

The writer wishes to express his sincerest appreciation to the following persons for their assistance during the development of this thesis:

Dr. C. C. Anderson, who originally suggested the research topic, for his wise counsel, consistent encouragement and constructive criticism; Dr. G. M. Dunlop, Dr. J. MacDonald, and Dr. C. N. Uhl for their helpful advice and criticism; Dr. C. Christensen and Mr. R. J. C. Harper for their helpful suggestions; the administrators and pupils of the Three Hills School Division who assisted with or participated in the experiment; my wife Irene for her assistance in preparing and scoring the questionnaires and especially for her encouragement and sacrifice.

TABLE OF CONTENTS

LIST OF TABLES

TABLE PAGE

CHAPTER I

AN INTRODUCTION TO THE PROBLEM

I. INTRODUCTION

Authors of personality inventories have been hampered in their attempts to construct reliable and valid measures of personality traits by the problem of 'fakability' or response set or response bias, a characteristic which refers to the observable attempt on the part of an inventory respondent to produce a false impression of himself (Cronbach, 1950). Faking of two kinds occurs: a testee may 'fake good', that is, he may attempt to produce a better image of himself than is true, or, less commonly, the testee may 'fake bad', that is he may attempt to produce a poorer image of himself than is true. The former is the more usual variety and is carried out as a partly conscious, partly unconscious defensive reaction to a test situation which is perceived as threatening. For example, when an individual takes a personality inventory in a situation of strong ego involvement (for example, an employment interview) a very concerted and conscious effort to 'fake good' is likely to be made. (Whyte, 1956, pp. 171-201). Loevinger (1959) suggests other ways in which faking does occur on personality

inventories. In view of all this, Sheldon (1959) suggests the use of a new statistic to be noted on psychological inventories: the 'fakability score'. This statistic would indicate the probable extent to which an inventory could be faked. It would be just as much a characteristic of a test as reliability and validity estimates.

II. THE SOCIAL DESIRABILITY CONCEPT

Edwards (1957) theorizes that faking on personality inventories is primarily due to the tendency of individuals to describe themselves in socially desirable terms. The concept 'social desirability' is therefore introduced and is defined by Edwards (1957) to mean the relative judged desirability or undesirability of descriptive statements of personality. More concisely, 'social desirability' may be defined as ". . . consensus judgments as to what behavior, feelings, and attitudes win social approval in American Society." (Fordyce, 1956, p. 171). This concept has been established as a result of research by Edwards and his associates, some of which is relevant to the present discussion.

A high positive correlation has been found between the scale value of a personality trait statement rated for desirability[1] and the probability that such a statement

---

[1] Scale values for the statements were determined by the successive intervals technique of scaling stimuli described by Edwards (1952).

would be endorsed by an individual on a personality inventory (Edwards, 1953, and Wright, 1957). This relationship is as significant for the situation in which the testee describes someone he likes as for when he describes himself. However, the correlation between the scale value and probability of endorsement when the testee describes someone he dislikes is negative (Edwards, 1959). The scale values of the statements were found to correlate very highly with the mean weights of the same statements as determined from a Q sort (Edwards, 1955; Kenny, 1956).

The ability to make discriminations in terms of the relative social desirability of trait statements seems to be universally established in Western society. Several studies demonstrate this. For example, the scale values of personality statements obtained by Edwards (1953) from a college sample were found to correlate significantly with the scale values of the same statements obtained from ratings by high school students (Klett, 1957 b), psychotic and non-psychotic hospital patients (Klett, 1957 c) and Norwegians (Lovaas, 1956). Edwards (1953), and Klett (1957 a) report that 'social desirability' is independent of age, sex, education, and socio-economic status.

Notwithstanding the above findings, Messick (1960)

criticizes the tendency of Edwards (1957) to regard the ability to make discriminations in terms of the relative social desirability of trait statements as universal. Messick argues in the following passage that it may be a statistical artefact:

> In evaluating this striking similarity in group opinions about the desirability of personality traits, it must be remembered that successive intervals scale values represent a kind of average for the group involved. Within-group ratings would need to be very homogeneous and between group differences quite marked before a low correlation would be expected between such averages (1960, p. 280).

Rosen (1956) also reported that correlations between self-appraisal profiles and socially desired profiles were often low at the individual level while the same correlations at the group level were high and significant.

Other more psychologically sophisticated authors are critical of Edwards' (1957) somewhat limited definition of 'social desirability'. Desoto (1959) and Cowen, Budin and Budin (1961), in studies which attempted to identify the social desirability concept more adequately, found that it is more closely allied to a personal set than a social set. Social desirability is better defined as "what the testee considers most essential for his 'well-being'" and not "what is socially approved." (Desoto, 1959, p. 274). Social desirability may be construed to mean not only how desirable or undesirable certain traits

are in others but also how such traits may enhance one's own sense of well-being--a more subtle concept than that proposed by Edwards but not entirely divorced from it. These findings lend plausibility to the assertion that 'faking good' in personality tests is a product of the respondent's drive to maintain a socially desirable mask or 'front'. (Goffman, 1959, p. 28).

CHAPTER II

THE SOCIAL DESIRABILITY DIMENSION AND SOME RELEVANT HYPOTHESES

I. EDWARDS' SOCIAL DESIRABILITY DIMENSION

On the basis of presented evidence regarding social desirability, Edwards (1957) assumed that the ability to discriminate between trait statements for social desirability is a linear personality dimension along which descriptive statements of personality traits might be scaled according to their social desirability or undesirability. Statements which are regarded by individuals as desirable have high scale values by definition whereas those statements which are rated as undesirable have low scale values. Items which are found to have very similar scale values are regarded by Edwards as being equated for social desirability.

Edwards then proceeded to design the Edwards Personal Preference Schedule (EPPS), an inventory utilizing a forced choice format. Descriptive statements with similar social desirability scale values[1] were paired and test respondents are asked to choose the statement which seems most like

---

[1] Edwards (1957) reports a correlation of 0.85 between the scale values of the two statements of the 210 item pairs of the EPPS.

themselves. Since the descriptive statements are based on fifteen of Murray's (1943) personality needs, and since each pair of statements contain items related to two of the needs it is expected that the inventory reveals the needs of the respondent by forcing him to select one statement. Edwards (1957) suggests that faking is controlled on his inventory because there is no evident socially desirable preference in the item pairs.

Now clearly, in doing so, Edwards is assuming two things: firstly, that these descriptive statements are aspects or manifestations or components of the ability to judge trait statements for the extent of their social desirability and that different people who adopt different attitudes to any one of these components will adopt the same attitude to them all. In technical language, the intercorrelations among preferences for these components by a sample of students will be so markedly positive as to yield evidence of a general factor. The ability to judge statements for social desirability will therefore be described as a unifactoral or unidimensional trait. Only on this assumption could Edwards exclude this 'homogeneous component' from influencing test respondents. You can talk about social desirability scale values only if the ability to discriminate in terms of social desirability is unidimensional.

The evidence regarding the success of the EPPS at

controlling faking is contradictory. Edwards (1957) reports that the probability of the choice of an A item correlates with the magnitude of the scale separation between A and B statements to the extent of 0.40, a result closely corroborated by Klett (1956) and Wright (1957). A very small proportion of the total variance of the inventory could be accounted for by this relationship. Kelleher (1958) found no point biserial correlations of any significance between scores on the social desirability scale and choice of the A or B item for the two hundred ten pairs of statements on the EPPS. Silverman (1957) concluded from a comparison of scores from the K scale of the MMPI and the EPPS that social desirability as measured by the K scale affects only the autonomy, endurance, and aggression needs, as measured by the EPPS, in any consistent fashion. Navran and Stauffacher (1954) found that the EPPS scores achieved by twenty-five affiliate nurses correlated 0.03 with self-descriptions and 0.01 with socially desirable descriptions made by the nurses using the fifteen EPPS variables. The correlation between self-description and socially desirable description was, on the other hand, found to be 0.90.

Notwithstanding the above findings indicating successful control of the social desirability factor by the EPPS, other studies report less favorable results.

Borislow (1958) worked with a small sample (nineteen cases) which was divided into three well matched groups. The three groups were given the EPPS two times each. For one administration each group followed Edwards' instructions. For the other administration, one group followed Edwards' instructions again, another group was asked to fake by choosing the most socially desirable item of each A-B pair while the third group was asked to fake by choosing the most personally desirable item of each pair of statements. The results demonstrated that the EPPS can be faked in terms of the desirability of the response alternatives, personal or social.

Corah, and others (1958) had thirty randomly chosen item pairs of the EPPS rated for social desirability by eighty judges. It was found that in twenty of the pairs one item was selected significantly more often in terms of social desirability than was the other. The preference of the judges in terms of 'social desirability' correlated highly with the choices of another group of subjects who took the scale as a standard personality inventory. Corah et al concluded that ". . . paired items can acquire contextual meaning which alters the values assigned to the same items when responded to separately." (1958, p. 72). Feldman and Corah (1960), in a well designed experiment and using a more closely matched though shortened forced

choice inventory than the EPPS, corroborated these results. Thus it appears that the forced-choice format may heighten the ability of the test respondent to discriminate on the basis of the social desirability factor.

Messick (1960) tested the assumption of unidimensionality underlying the construction of the EPPS. The data collected by Klett (1957 c) from one hundred eighteen manifestly disturbed hospital patients was re-analyzed. Forty-two of Edwards one hundred forty items describing personality traits were chosen by Messick, three items arising from each of fourteen of Edwards' fifteen needs (abasement was omitted). Each item had been rated for desirability on a nine point scale ranging from extremely undesirable (1) to neutral (5) to extremely desirable (9). Product moment correlations were computed among the ratings of the forty-two items using the integers from one to nine to represent the rating categories. Factor analysis of the intercorrelations revealed that not one but nine separate factors or dimensions of social desirability were in operation: ETS Developments (April, 1960) reports these nine factors to be "points of view" about "desirability." Messick (1960) suggests that the consistent variation is found ". . . not so much among clearly defined social groups, . . ., as among individual points of view." (1960, p. 286). This finding tends to invali-

date one of the major assumptions underlying the use of the forced choice type of inventory.

The above research suggests two possible explanations for the finding that the EPPS can be faked. The first is that the slight difference in scale values of the paired statements is magnified by the pairing and consequently it is easier to discriminate for social desirability in the forced choice format. Alternatively, it is possible that judgments of statements for social desirability is done against a multidimensional frame of reference and hence equality of the numerical 'social desirability' values assigned to two statements need not infer that the statements are located by identical co-ordinate points in the space defined by the frame of reference against which the judgments for social desirability were made. The present investigation is related to this second explanation.

II. ESTABLISHMENT OF HYPOTHESES

Unpublished research by Harper (1961) derived from work with female neurotics on the semantic differential indicates that introverted neurotics (dysthymics) make markedly more discriminating judgments about social concepts than do normals. From this suggestion that normals make less fine discriminations than neurotics, it is possible to infer that the concept of social desirability will be markedly more general for normals than for neurotics.

On this basis, it is not surprising that the ratings of Messick's manifestly disturbed hospital patients provided evidence of a multidimensional conception of social desirability, and it is possible to derive the present, primary hypothesis that a sample of normal adolescents will yield intercorrelations giving evidence of a general factor. A reconciliation of the positions of Messick and Edwards now becomes possible, their differences being attributed to the different sorts of respondents they sampled.

Two other hypotheses related to the size of the general factor expected at different age (grade) and sex levels arise from different sources. Anderson (1961 b) found a progressive increase from Grades VII to XI in preference for conventional, moralistic attitudes and traditional values by adolescents in Alberta. Such a trend would sustain consistent evaluation in terms of social desirability of many of the needs represented in the questionnaire. Thus we might hypothesize that there will be an increase in the generality of a general factor as grade (age) increases. A third hypothesis arises out of expected sex differences in ratings for social desirability. Davis (1956) asserts that ". . . in early life, girls in the United States are more severely trained than boys and more systematically intimidated with respect to nearly all the same basic, psychological drives." (1956, p. 214).

If we can assume that Murray's needs do cover these fundamental drives and that such a strict training would result in a consistency of students' appraisal of statements about these needs, then we would expect that girls would contribute more variance to a general factor.

Finally, if in fact "points of view" about social desirability do appear, it seems reasonable to hypothesize that these "points of view" in adolescent groups will differ from those identified by Messick (1960).

III. THE HYPOTHESES

The present study was undertaken to test the validity of the following hypotheses:

1. A general factor of social desirability exists in adolescence.

2. Such a factor of social desirability becomes increasingly more general with advancing age.

3. Such a factor of social desirability is more general for girls than for boys at all age (grade) levels.

4. Any identifiable "points of view" about social desirability found in adolescence are different from those which were found in Messick's neurotics.

CHAPTER III

THE EXPERIMENTAL DESIGN

This study is basically a replication of Messick's (1960) study using a normal high school population and a revised trait rating form.

I. THE QUESTIONNAIRE[1]

The questionnaire, the design of which is due to Messick[2], consists of a selection of fifty-four trait statements taken from the EPPS. These statements are representative of Murray's fifteen needs. The distribution of the number of statements per need and where each statement may be found in the questionnaire is given in Table I. Each trait statement is followed by a nine point rating scale for rating the statement for social desirability by the Edwards' (1957) criterion of social desirability. The check marks made by the rater are

---

[1] See Appendix for a copy of the Questionnaire.

[2] The writer wishes to thank Dr. S. Messick of Educational Testing Service for his kind permission to duplicate his Trait Rating Form; and Dr. A. S. Edwards and The Psychological Corporation for permission to use Messick's version of the Edwards Personal Preference Schedule.

TABLE I

DISTRIBUTION OF THE TOTAL NUMBER OF TRAIT STATEMENTS IN THE QUESTIONNAIRE FOR EACH NEED AND EACH STATEMENT'S POSITION IN THE QUESTIONNAIRE

Need		Frequency	Position				
Abasement	Aba.	3	12	23	29		
Achievement	Ach.	3	1	21	36		
Affiliation	Aff.	3	27	50	54		
Aggression	Agg.	5	10	26	32	35	41
Autonomy	Aut.	4	6	13	24	52	
Change	Chg.	4	2	16	42	49	
Deference	Def.	3	7	40	47		
Dominance	Dom.	4	8	15	30	33	
Endurance	End.	3	22	37	48		
Exhibitionism	Exh.	5	9	18	31	45	53
Heterosexuality	Het.	5	4	14	39	44	51
Intraception	Int.	3	3	19	25		
Nurturance	Nur.	3	11	17	38		
Order	Ord.	3	20	28	43		
Succorance	Suc.	3	5	34	46		

then scored as one, two, and up to nine according to which box is checked with the higher values assigned to the "desirable" end of the rating continuum.

The questionnaire is such that it is easily administered in a one-half hour period to a group of high school students.

II. THE SAMPLE

The group to whom the questionnaire was administered, consisted of the Grade X, XI, and XII students from three high schools in the Three Hills School Division (Three Hills, Torrington, and Trochu High Schools) plus the Grade XII students from a fourth high school (Acme High School) of the same division. The distributions of students by grade and sex are given in Table II together with the average age, the average intelligence quotient, and standard deviation of intelligence quotients for each group.

The t-tests for the difference between means reveal that there is a difference significant at the 0.05 level between the mean intelligence scores for Grade XI girls and both Grade X girls and Grade XI boys and between Grade XII girls and both Grade XI boys and Grade XII boys; the difference between Grade XII girls and both Grade X girls and Grade X boys is significant at the 0.01 level. These are significant differences which one might expect

TABLE II

NUMBER, MEAN AGE, MEAN AND STANDARD DEVIATION OF INTELLIGENCE SCORES OF EACH GRADE AND SEX GROUP IN THE SAMPLE

				Intelligence*	
Grade	Sex	Number	Mean Age	Mean	Standard Deviation
X	F	34	15 yrs. 4 mo.	102.8	13.3
	M	42	15 yrs. 6 mo.	102.8	12.5
XI	F	33	16 yrs. 4 mo.	108.7	12.1
	M	31	16 yrs. 8 mo.	104.2	10.9
XII	F	41	17 yrs. 7 mo.	110.0	11.1
	M	34	18 yrs. 0 mo.	104.5	10.6

*The intelligence scores were derived from Otis Quick Scoring Mental Ability Tests, form Gamma C.

due to the differential drop outs in the upper school grades.

The Three Hills School Division is located in south-central Alberta. Its major industry is farming and consequently any urbanization consists of small communities of less than fifteen hundred people. For this reason, the sample is described as predominantly rural.

III. THE PROCEDURE

The trait rating form was administered to the participating students by the principal or the vice-principal of the schools involved. The instructions on the second page of the questionnaire were rigidly adhered to, particularly with reference to all passages relating to the defining of social desirability and the subsequent expected behavior of the testee. Where possible, the trait rating form was administered to all participating grades in the school on the same day. However, in one instance, the administrative organization of the school prevented this and two consecutive days were required to test the three grades. No time limit was set but in all instances a forty-five minute period was available and the students easily finished the task in that time interval.

IV. STATISTICAL ANALYSIS[1]

Responses to the fifty-four trait rating form items by each sex at each grade level were intercorrelated so that a symmetric matrix of order fifty-four composed of the coefficients of correlation was available for the six sub-groups: Grade X girls, Grade X boys, Grade XI girls, Grade XI boys, Grade XII girls, and Grade XII boys. A similar matrix composed of the intercorrelations of questionnaire items for the total group was also prepared.

Each of the seven matrices was factor-analyzed in a fashion almost exactly the same as that used by Messick[2]. The primary centroid analysis was rotated analytically to oblique simple structure by the Oblimax method[3].

---

[1] The writer wishes to thank Mr. Steve Hunka for assisting with the factor analysis and for arranging the mechanical calculations of the intercorrelations by Illiac.

[2] The Centroid analysis was done using a slightly more sophisticated and statistically elegant procedure than was Messick's.

[3] For a discussion of the Oblimax method of analytical rotation, see Harman (1960, pp. 309-324).

CHAPTER IV

FINDINGS

I. QUESTIONNAIRE RELIABILITY

Guilford (1954, p. 377) states that when a test is unspeeded, a split-half reliability estimate is not inflated by the contribution of speed of work and hence provides a satisfactory estimate of the reliability of the test. Consequently, a split-half reliability was calculated for the trait rating form.

Since the trait rating form is composed of statements representing fifteen personality needs, an attempt was made to split the fifty-four variables into two halves with each half containing equal numbers of items representing each need. Table I indicates, however, that this criterion of division is impossible to meet since all but three of the needs are represented by an odd number of variables. For the majority of the needs then, the best possible division would allocate one more statement to one half than to the other. Further reference to Table I makes it clear that an odd-even division of the questionnaire meets the optimal criterion of division for all but four needs: Autonomy, Change, Exhibitionism, and Intraception. An even numbered variable

from each of the needs, Autonomy and Change, was randomly selected and allocated to the odd half of the questionnaire while an odd member from each of the needs Exhibitionism and Intraception was randomly selected and allocated to the even half of the questionnaire. The assumption of matched halves seemed to be most satisfactorily satisfied by this division technique.

Kenny and Keeping (1954, p. 286) indicate that if the assumption of equal variance can be met by the two halves of the questionnaire, then a best estimate of the correlation between the two halves of the questionnaire is given by

$$r = \frac{2\, s_{xy}}{s_x^2 + s_y^2}$$

where s_{xy} represents the covariance of the two halves of the questionnaire and s^2_x and s^2_y each represent the variance of a half of the questionnaire. The F-test for the significance of differences between variances allows the inference of equal variance for the halves to be made for each grade and sex group as well as for the total sample group. The calculation of the correlation between the halves of the trait rating form by the above described method and correcting it for length by the Spearman-Brown formula gives the following tabulated results shown in Table III.

TABLE III

CORRECTED SPLIT-HALF RELIABILITY OF THE QUESTIONNAIRE FOR THE VARIOUS GROUPS

Grade	Sex	Reliability (r_{iI})	95 Per Cent Confidence Interval For r_{iI}
X	F	0.860	0.724 - r_{iI} - 0.925
	M	0.810	0.660 - r_{iI} - 0.890
XI	F	0.717	0.479 - r_{iI} - 0.845
	M	0.909	0.808 - r_{iI} - 0.953
XII	F	0.806	0.660 - r_{iI} - 0.885
	M	0.861	0.724 - r_{iI} - 0.923
Total Sample		0.845	0.801 - r_{iI} - 0.879

Guilford (1954) has the following to say regarding the reliability of questionnaires in an experiment using factor analysis:

> The tests should be of high internal consistency, but the time required in administration is also an important consideration. There must often be compromises. A large battery runs into much examinee time and often there are absolute limits for the total testing time. Short tests are therefore desirable, as short as they can be and yet give sufficient reliability. A lower limit of 0.60 might be given as a standard for reliability. (1954, p. 532).

Table III indicates that for only one group (Grade XI girls) does the lower 95 per cent confidence limit for the reliability slip below Guilford's standard. It is evident that for all practical purposes, the questionnaire has sufficient reliability to enable it to be used as a research instrument.

II. THE INTERCORRELATIONS OF QUESTIONNAIRE VARIABLES

Each matrix of intercorrelations was examined to determine the number of coefficients which were significantly different from zero. The results of this analysis are given in Table IV.

The extent to which the number of positive, significant correlations found in each matrix was greater than the number which might have been expected on the

TABLE IV

NUMBER OF QUESTIONNAIRE ITEM INTERCORRELATION COEFFICIENTS WHICH ARE SIGNIFICANTLY DIFFERENT FROM ZERO AT THE 0.05 LEVEL IN A POSITIVE OR NEGATIVE DIRECTION FOR EACH GRADE AND SEX

Grade	Sex	Positive	Negative	Not Significant
X	F	114	37	1280
	M	142	33	1256
XI	F	119	45	1266
	M	187	15	1229
XII	F	138	41	1252
	M	172	54	1205

basis of chance was determined by using the chi-square significance test. Similar chi-square tests were made on the number of negative, significant correlations found in each matrix. The lowest value of chi-square obtained in the first case was $\chi^2 = 10.385$[1] and the greatest value of chi-square calculated from the latter case was $\chi^2 = 2.566$. Since $\chi^2_{0.99} = 6.635$ and $\chi^2_{0.95} = 3.84$ for these tests, we may reject the hypothsis that the number of significant, positive correlations can be explained by chance for <u>each</u> matrix at the 0.01 level of significance while we must accept the hypothesis that the number of significant negative correlations can be explained by chance factors.

On the basis of this data we may infer tentatively that a factor is operating in the adolescents' ratings of trait statements for social desirability which is causing the large number of significant positive correlations observed. Statistical logic states that if any set of variables is positively and significantly intercorrelated, then the performance of subjects with respect to these variables is based on a common factor.

---

[1] Corrected for discreteness of distribution by Yates' Correction as are all two x two chi-square values reported in this thesis.

This was the argument by which Spearman initially conceptualized "g". (Thompson, 1951, Chapter IV). It seems reasonable to argue that evidence for a general factor underlying performance on a set of rating tasks is strong when a significantly large number of positive correlation coefficients appear in a matrix.

Further correlational evidence is found in the numbers of significant, positive correlations which appear in the matrices. Chi-square tests reject both of the null hypotheses that the number of significant positive correlation coefficients is independent of grade and sex. The value of chi-square obtained for the former hypothesis is $\chi^2 = 6.934$ ($\chi^2_{0.95} = 5.991$) and for the latter hypothesis, the value of chi-square obtained was $\chi^2 = 21.572$ ($\chi^2_{0.99} = 6.635$). There is evidence not only for a general factor of social desirability in the number of significant, positive correlations observed in the matrices but also for the assertion that the factor is dependent upon grade (age), becoming increasingly general as grade (age) increases and at all times being more general for males than females. We may draw the preliminary conclusion from this correlational analysis that a general factor of social desirability exists in adolescence which increases in generality with

age and which is more general in males than females. We have preliminary support for hypotheses one and two; the third hypothesis is rejected by this preliminary analysis.

III. THE CENTROID ANALYSIS

The centroid factor analyses of the matrices extracted seven significant factors for the six subgroup matrices and ten significant factors for the total sample matrix. The proportion of the total variance each centroid factor extracts is given in Table V.

Messick (1960, p. 281) assumes that no general factor exists in a matrix of intercorrelations if a factor accounts for no more than twenty per cent of the total variance. However, an examination of Table V reveals that for each group considerably more than twenty per cent of the total variance is accounted for by the first factor. Thus using Messick's criterion, it may be inferred that a general factor of social desirability exists.

It must of course be recognized that such a centroid factor is a statistical artefact and that the centroid method of factor analysis attempts to maximize

TABLE V

PERCENTAGES CONTRIBUTED TO THE TOTAL VARIANCE BY THE CENTROID FACTORS IN EACH OF THE SEVEN MATRICES

	Factors									
Groups	1	2	3	4	5	6	7	8	9	10
X Girls	23.72	17.41	14.14	11.03	10.86	10.16	7.60	-	-	-
X Boys	24.49	19.86	10.64	11.59	11.05	9.69	9.24	-	-	-
XI Girls	25.23	16.06	14.05	12.38	11.06	8.84	9.50	-	-	-
XI Boys	28.34	16.48	14.45	10.96	8.59	7.94	7.00	-	-	-
XII Girls	27.09	13.44	13.80	12.32	0.17	9.00	8.50	-	-	-
XII Boys	31.82	19.20	11.95	10.47	8.20	8.60	7.90	-	-	-
Total Sample	34.62	16.52	7.45	7.65	5.71	5.14	5.37	5.06	4.59	3.67

the proportion of the total variance removed by the first factor. Consequently, it is dangerous to place too much weight on these results. It must be noted in addition that suitable graphical rotations of the centroid axes must be made in order to interpret the centroid factors psychologically; it is often possible to increase the proportion of the variance attributable to a given factor by such rotations[1]. In the light of this discussion, it seems reasonable to suggest that with suitable rotations, the first centroid factors might be made to account for at least as much of the total variance as they now do and thus, be interpreted as general factors.

It is satisfying to note that the trends developed by the first centroid factor variances of Table V, complement the findings obtained from the intercorrelation matrices. While no statistical methods are available to test the significance of the trends, it can be readily seen that as grade (age) level increases the percentage of the variance removed by factor one increases and, at each grade level the boys contribute more to the variance of the first factor than do the girls.

---

[1] See a discussion of this matter in Harman (1960), Chapter XII, or Fruchter (1954), Chapter VII.

A breakdown of the first centroid factors reveals the following interesting results for each of the groups if the loadings above 0.25 only are considered. See Table VI.

An examination of Table VI leads to two interesting observations. The first is that the factors are relatively similar in their psychological appearance over the groups and consequently the factor which is more fully general in Grade XII might be considered emergent in the Grade X group. Secondly, it may be noted that across all groups, the social desirability judgments remain relatively stable for what Sanford (1956) terms authoritarian needs: Heterosexuality, Autonomy, Dominance, Aggression, and Exhibitionism whereas there is considerable variability in the judgments of the relatively more "tender-minded" needs such as Succorance, Abasement, and Deference.

The foregoing evidence suggests that the general factor which operates to influence ratings of social desirability by subjects does so in a consistent fashion across grade (age) and sex groups of adolescents for the "authoritarian" needs. This factor does not appear to be psychologically involved to the same extent in the "tender-minded" needs. A tentative explanation of this will be attempted in the discussion.

TABLE VI

DISTRIBUTION OF SIGNIFICANT (>0.25) POSITIVE AND NEGATIVE CENTROID LOADINGS ASSOCIATED WITH MURRAY'S NEEDS FOR ALL GROUPS

	Total Sample f		X Girls f		X Boys f		XI Girls f		XI Boys f		XII Girls f		XII Boys f	
Needs	+	-	+	-	+	-	+	-	+	-	+	-	+	-
Het.	5		4		5		4		5		4		5	
Aut.	4		3		3		2		4		4		3	
Dom.	2		3		3		3		4		2		3	1
Agg.	5		3		3		5		5		5		3	
Exh.	4		5		4		4		3		4		3	
Ach.	1	1	2	1	2		1	2	1		1		1	1
Chg.			1	1	3				3				1	1
Ord.		1	1		1		1		2				1	2
Aff.		1		1		1	1	2			1	2	1	1
Nur.		2	1	1			1	1	1		1	2	1	1
Int.					1			2	3		1			1
Suc.			2		2		1		3		2			2
Aba.		2	2			1		1		1		2		2
End.		2						2	1	1		1		1
Def.			1		1				1		1			1

IV. THE OBLIMAX ROTATIONS

The analytical rotation of the centroid factors yielded the following distributions of significant (above 0.25) factor loadings both positive and negative for each grade and sex group.

TABLE VII

DISTRIBUTIONS OF THE NUMBER OF SIGNIFICANT, OBLIMAX ROTATION FACTOR LOADINGS, POSITIVE AND NEGATIVE FOR EACH GRADE AND SEX

		Oblimax Factor						
		1	2	3	4	5	6	7
X Girls	+	7	3	10	15	3	9	6
	-	10	19	11	2	7	4	15
X Boys	+	8	11	5	9	15	3	6
	-	10	8	20	13	3	18	11
XI Girls	+	3	6	16	7	9	10	7
	-	13	8	6	13	14	13	9
XI Boys	+	4	14	4	11	9	4	14
	-	15	3	15	5	15	13	7
XII Girls	+	4	19	9	17	11	7	14
	-	9	2	13	2	5	12	4
XII Boys	+	9	8	10	26	11	12	21
	-	11	14	11	11	8	14	7

The oblimax factors obtained in the present study are markedly broad in terms of the number of variables which have high loadings. They are also very different from one group to the next in terms of numbers of variables which have high loadings on the various factors. Table VIII provides more relevant information regarding the oblimax factors.

TABLE VIII

DISTRIBUTION OF SIGNIFICANTLY LOADED VARIABLES AGAINST THE NEEDS THEY REPRESENT FOR EACH GRADE, SEX, AND OBLIMAX FACTOR

A. Oblimax Factor 1.

	X Girls f		X Boys f		XI Girls f		XI Boys f		XII Girls f		XII Boys f	
Needs	+	-	+	-	+	-	+	-	+	-	+	-
Het.	2	1		1	1	2				1		1
Aut.	1		1	1			1	1			1	
Dom.	2	1				1		2	1		1	1
Agg.		2		2	2			1		1	1	
Exh.				2			1	2			1	2
Ach.	1		2	1			1	1			1	
Chg.				3		3		1		1	2	1
Ord.	1					1		2			1	
Aff.		1				2		1		1		2
Nur.		2	1				1		1			1
Int.		1	1			3		1	2		1	
Suc.		1								3		1
Aba.		1	2					1		1		1
End.			1			1						
Def.								2		1		1

TABLE VIII (Continued)

B. Oblimax Factor 2.

	X Girls f		X Boys f		XI Girls f		XI Boys f		XII Girls f		XII Boys f	
Needs	+	-	+	-	+	-	+	-	+	-	+	-
Het.		2	3		1	1			4		3	
Aut.	1	2	1				1	1	2		2	
Dom.		3	2						1	1		2
Agg.		2		2	2	1			3			3
Exh.		3		2		1		2	3			1
Ach.			1			1	2		1			1
Chg.		1		1		1	1		1			
Ord.		1	1				1			1		
Aff.			1				1					1
Nur.	1	1	2		1		2					1
Int.				1			1		1			1
Suc.		3							1		1	
Aba.		1			2		3		1			1
End.				1		2	1				1	2
Def.	1			1		1			1		1	1

TABLE VIII (continued)

C. Oblimax Factor 3.

	X Girls f		X Boys f		XI Girls f		XI Boys f		XII Girls f		XII Boys f	
Needs	+	-	+	-	+	-	+	-	+	-	+	-
Het.	1				4			5		2		1
Aut.	2			1	1	1		2		2	2	
Dom.				4	2	1		1		2	1	2
Agg.	4		1		2			4	1	2		1
Exh.	1			1				1	1	1	1	
Ach.	1	2		1	1			1	1	1		
Chg.			1	3	1					1	1	
Ord.		1	1	1	1					1	1	1
Aff.		2		1			2		1			1
Nur.			1	1								1
Int.		1		1	1	1		1	1			1
Suc.	1			3	1							3
Aba.		1		1		1			3		2	
End.		3	1	1	1	1	1		1	1	2	
Def.		1		1	1	1	1					

TABLE VIII (continued)

D. <u>Oblimax Factor 4</u>.

	X Girls f		X Boys f		XI Girls f		XI Boys f		XII Girls f		XII Boys f	
Needs	+	-	+	-	+	-	+	-	+	-	+	-
Het.	4			1	1		1	1		1	4	
Aut.	1		1	1	1	1	1		1		3	
Dom.			1		1				2	1	2	1
Agg.	1		1	1			1				4	1
Exh.	1			1		1	4		1		1	1
Ach.	1			2		1		1	2		2	
Chg.			1		1	2			1		2	
Ord.	1	1	1	1		1			1		3	
Aff.		1		1		2		1			2	
Nur.	1		1	1		2		2	1		1	
Int.	2		1	2					3			2
Suc.			2			2	2		3		1	
Aba.	1			1	2		1					2
End.				1	1				1			2
Def.	2					1	1		1		1	2

TABLE VIII (continued)

E. Oblimax Factor 5.

Needs	X Girls f		X Boys f		XI Girls f		XI Boys f		XII Girls f		XII Boys f	
	+	-	+	-	+	-	+	-	+	-	+	-
Het.			1		2			1	1			1
Aut.			3			2		1	1		2	
Dom.			1		1	2	1	1			1	
Agg.			1			2		1		2	3	
Exh.		1	3			3	2		2		2	
Ach.		1	1					1	1			
Chg.	3				1		1		3		2	1
Ord.			1	1				2		1		2
Aff.		1				1		3				
Nur.				1	1			2				2
Int.			2			2			2			
Suc.					1			1				
Aba.		2					3					1
End.		1	1		1	1		2	1	1	1	
Def.		1	1	1	2	1	2			1		1

TABLE VIII (continued)

F. Oblimax Factor 6.

	X Girls f		X Boys f		XI Girls f		XI Boys f		XII Girls f		XII Boys f	
Needs	+	-	+	-	+	-	+	-	+	-	+	-
Het.	1			5	1					2		2
Aut.				1	1	1		2	1	1	1	
Dom.	1			1		1	1	1	2	1		
Agg.				1		2	1	3	1			
Exh.	1				2	3		1			1	2
Ach.	1	1				2	1		1	1	3	
Chg.	2			1	2			2		1	1	1
Ord.					1					1		
Aff.	1		1	2			1			2	1	1
Nur.		1		2	1	1				1	1	
Int.		1		1		1		1	1			1
Suc.					1			1	1		3	
Aba.	1		1	2	1	1						3
End.	1	1						1		1	1	2
Def.			1	2		1		1		1		2

TABLE VIII (continued)

G. Oblimax Factor 7.

	X Girls f		X Boys f		XI Girls f		XI Boys f		XII Girls f		XII Boys f	
Needs	+	-	+	-	+	-	+	-	+	-	+	-
Het.	1	2				1	1		3		1	1
Aut.		2		1	1	1		1	1		1	1
Dom.		3		1		1	1	1			1	
Agg.	1	1	1	1	1	1		3	1		2	
Exh.	1	3		1	1		2	1		1	1	
Ach.				1			1			1	1	2
Chg.	1		2				1	1		1	2	
Ord.				2	1	1	2		1		2	
Aff.				1		2			1		3	
Nur.		1	2	1			1		1			2
Int.							1				2	
Suc.	2				2		3		2		1	
Aba.		2	1						1		2	
End.		1		2		2	1		2		1	
Def.					1				1	1	1	1

If, after Messick (1960), an attempt is made to identify "points of view" about social desirability, Table VIII indicates that no consistent trends emerge for the oblimax factors nor are there any relationships apparent among the factors in so far as needs which are significantly loaded are concerned; consequently a conglomeration of widely disparate "points of view" will have to be contemplated. The value of identifying such factors seems insignificant if no generalizations can be made other than that heterogeneity of "points of view" about social desirability is found between different groups. This disparity between the present findings and those of Messick can be further amplified by a comparison of Messick's (1960) oblimax factors ("points of view") with those obtained from the present study. Such a comparison is made difficult by the fact that of the forty-two items in the Messick (1960) questionnaire, only thirty-two are also included in the present study's questionnaire.

Table IX indicates that Messick's (1960) factors contain fewer variables with significant loadings than do the factors of the present study.

The generality of the factors in the present study compared with the narrowness of Messick's factors is clearly indicated. Having fewer variables with signifi-

TABLE IX

NUMBER OF VARIABLES WITH SIGNIFICANT LOADINGS (ABOVE 0.25) ON MESSICK'S (1960) FACTORS AND ON THE FACTORS OF THE PRESENT STUDY

	Factors								
	1	2	3	4	5	6	7	8	9
Messick	5	6	11	3	5	6	3	4	16
X Girls	17	22	21	17	10	13	21	-	-
X Boys	18	19	25	22	18	21	17	-	-
XI Girls	16	14	22	20	23	23	16	-	-
XI Boys	19	17	19	16	24	17	21	-	-
XII Girls	13	21	22	19	16	19	18	-	-
XII Boys	20	22	21	37	19	26	28	-	-

cant loadings, Messick's oblimax factors would be very much easier to interpret psychologically than those found in the present study. The lack of overlap in the variables with significant loadings from the two studies is indicated in the following Table X.

It can be seen from Tables IX and X that so few of the significantly loaded variables of the oblimax factors of the two studies overlap that they could not be interpreted similarly. The contrast between the broad, heterogeneous character of the oblimax factors of the present study and the narrow, homogeneous character of the Messick (1960) factors suggests that an attempt to delimit the nature of social desirability by the different "points of view" strategy is likely to be unproductive.

V. RELATION OF THE FINDINGS TO THE HYPOTHESES

The first two hypotheses find reasonable support from the analysis of the ratings. The preponderance of positive intercorrelations among the questionnaire variables and the size of the first centroid factor extracted from each matrix suggest that a general factor does exist in adolescence. While this factor controls at best but thirty-four per cent of the total questionnaire variance, it is still large enough to

TABLE X

NUMBER OF VARIABLES WITH SIGNIFICANT LOADINGS (ABOVE 0.25) APPEARING IN BOTH MESSICK'S (1960) FACTORS AND THE FACTORS OF THE PRESENT STUDY

Present Factors		Messick's Factors								
		1	2	3	4	5	6	7	8	9
X Girls	1	2	-	1	1	-	2	-	1	2
	2	2	3	4	1	2	1	1	2	4
	3	2	2	2	1	1	1	-	-	4
	4	3	-	2	2	1	1	-	1	3
	5	1	-	1	-	-	-	2	1	2
	6	1	1	2	-	2	2	1	-	2
	7	-	1	4	2	2	1	-	-	3
X Boys	1	-	3	2	2	1	-	2	-	5
	2	-	1	2	2	1	3	1	2	5
	3	1	3	7	1	2	3	3	2	4
	4	4	1	4	-	2	-	1	-	4
	5	2	-	2	1	2	2	-	3	3
	6	-	1	1	1	-	4	1	2	4
	7	2	-	4	1	1	1	1	-	6

TABLE X (continued)

Present Factors		Messick's Factors 1	2	3	4	5	6	7	8	9
XI Girls	1	1	2	2	1	2	-	1	-	4
	2	2	-	2	2	-	-	1	-	2
	3	1	1	2	-	2	1	-	2	4
	4	1	-	3	1	2	4	1	1	5
	5	1	2	2	-	3	2	2	2	5
	6	2	3	5	-	-	1	2	1	3
	7	-	1	2	1	1	1	-	2	3
XI Boys	1	1	2	2	-	1	2	2	2	6
	2	4	-	2	1	-	1	-	1	3
	3	1	3	1	3	-	1	-	1	3
	4	1	4	4	1	-	1	-	1	2
	5	2	1	1	-	3	-	1	1	1
	6	2	2	3	-	2	-	2	1	3
	7	1	-	3	1	1	-	2	1	6

TABLE X (continued)

Present Factors		Messick's Factors								
		1	2	3	4	5	6	7	8	9
XII Girls	1	2	1	4	-	-	1	1	1	2
	2	1	5	2	2	3	-	1	1	2
	3	1	2	2	2	2	-	-	1	2
	4	2	2	3	-	2	-	1	2	4
	5	1	-	1	1	1	-	2	2	3
	6	2	1	2	1	-	2	2	1	4
	7	-	-	2	3	1	2	1	1	3
XII Boys	1	1	1	2	-	2	3	1	2	4
	2	2	3	2	3	2	1	-	1	6
	3	1	2	4	1	2	1	-	1	3
	4	1	2	4	2	4	3	2	3	7
	5	2	3	3	2	2	1	1	3	4
	6	2	1	3	2	1	0	2	2	6
	7	3	2	2	1	1	4	3	2	8

yield a correlation of approximately 0.6 between social desirability ratings and this factor. As well, we find that the number of significant positive correlations and the first centroid factors suggest that the general factor of social desirability becomes more general with advancing age. The unexpected finding of the analysis was that the general factor of social desirability is more general for boys than for girls. This finding will be discussed more fully in connection with the development of a theory of response set. Finally, the lack of similarity between the oblimax factors of Messick's and the present study and, less happily, between the various sub-groups of the present study lends support to the fourth hypothesis. The determination of "points of view" about social desirability seems to be an ineffective way to delimit social desirability.

CHAPTER V

THE DISCUSSION[1]

An attempt will be made in this chapter to develop a psychological theory of response set which might plausibly account for the findings of Edwards, Messick, and the present study. Since the research evidence is so limited in this area, any theory developed is not completely satisfactory and contains serious defects. Consequently, two different approaches to the development of a theory are undertaken here. It of course remains for further research to be done in the area before it can be suggested which is preferable; on the basis of the findings to date only tentative suggestions can be made.

I. THE FIRST THEORY OF RESPONSE SET

Loevinger (1958) theoretically approaches the problem of response bias from the psychological concept of ego development. Response bias is defined as ". . . the ability to assume distance from oneself, or . . . as

---

[1] The first theory to be described was suggested by Dr. C. C. Anderson; the second is an elaboration by Anderson and Traub of a hint by Dr. C. M. Christensen concerning the relationship between the oblimax factors extracted and extroversion.

[the] capacity to conceptualize oneself. It is one cognitive aspect of ego development." (1958, p. 36). The continuum developed for 'response bias' is brought into focus through descriptions of three "anchorages:" Sherif and Sherif, 1956, p. 46).

> At the lowest point there is no capacity to conceptualize oneself; at the midpoint there is a stereotyped, usually conventional and socially acceptable self-conception; and at the highest point a differentiated and more or less realistic self-concept. (Loevinger, 1958, p. 36).

The lowest point is descriptive of childhood and the stage of ego development achieved by a child; they know no distance from ego or impulse. The midpoint of the continuum represents the stage of development achieved by adolescents.

> By early adolescence the ability to conceptualize one's impulses and the concomitant degree of control is fairly well established. But the typical adolescent is in many respects an "authoritarian personality." He is prone to think in stereotypes, to be punitive, disciplinarian, conventional, anti-psychological and intolerant of those who are different. In terms of ego development here being described, he has achieved distance from his impulses but not from his ego. (1958, p. 37).

The college years of training tend to lead the individual to the upper end of the continuum. In college the tendency is ". . . to view oneself with detachment, to see oneself as having a style of life, to report feelings without taking refuge in conventional stereotypes." (1958, p. 37). The college years encourage growth to

the stage of achieving . . . distance from ego as well as impulse." (1958, p. 37). It is obvious that the development of the ability to achieve distance from impulse and ego operates as a function of age.

The descriptions Loevinger makes of the various anchorages located along the continuum identifies this continuum with dogmatism, high dogmatism being coextensive with little distance from ego and impulse and low dogmatism being coextensive with considerable distance from ego and impulse. The dogmatic person is illogical, stereotyped, authoritarian and biased. He appears in Loevinger's descriptions of individuals who have achieved little distance from ego, or impulse and ego combined, that is, the adolescent or the child. If we define one aspect of dogmatism, consequently, in an operational fashion as the lack of ability to be objective in the rating of trait statements for social desirability, then the dogmatic individual will not rate the trait statements in terms of social desirability but rather in terms of the prejudices, biases, and stereotypes which influence his judgments. It is therefore likely that he will tend to be less consistent in his appraisal of statements for social desirability, that is, he will not tend to objectively evaluate the trait statements in terms of social

desirability alone. Consider, for example, the needs for autonomy and succorance. The authoritarian individual is characteristically ambivalent towards his parents, expressing overt 'idealization' and respect and yet displays marked hostility on occasion. In connection with the questionnaire presently used, this may very well result in a high rating of need for autonomy (Sanford, 1956, p. 271) coupled with a low rating for succorance. The non-dogmatic individual, on the other hand, who has not been brought up under such restrictive child rearing practices so characteristic of the authoritarian parent (McCandless, 1961) may very well rate both needs very highly or very lowly (Dowan and Adelson, 1958). That dogmatism declines as a function of age is suggested by the Loevinger theory and has been in fact validated by Anderson (1961 a) in work with adolescents in Edmonton, this decline being very noticeable between Grades X and XII. This implies that, as a subject becomes older and less dogmatic, there should be a corresponding trend toward consistency of appraisal of needs related to dogmatism in terms of social desirability.

From the position established above, we would make two predictions: Firstly, that the general factor of social desirability would develop increasingly through

Grades X to XII to parallel the decline in dogmatism, and, secondly, that neurotics, whatever their age, will show no such general factor.

Another implication arises from Anderson's work. He has demonstrated that there is a consistent trend for women, especially intelligent women, to be significantly more dogmatic than men, especially intelligent men. If this is correct and especially in view of the fact that the dull females and males tend to drop out of school at the later grade levels, and if the decline in dogmatism is paralleled by an increase in the general factor of social desirability, _then_ the males who are relatively less dogmatic should contribute more to the general factor than females and increasingly so with advancing grades.

Each prediction arising out of the theory of response set developed above is consistent with the evidence from Messick's and the present study. By such a criterion this theory appears adequate.

The major shortcoming of this theory, and indeed of the one to come, is that it provides no chain of reasoning or psychological observations to link the first two hypotheses to the psychometric

predictions made. Findings should be either logically implied in the hypothesis or should be linked to it by a chain of accepted observations, not as in the present case by some 'reasonable' speculation. Let us agree--otherwise the theory is impossible--that the dogmatic person is defensive about most needs: Will this not result in a consistency of item appraisal and a consequent general factor of social desirability?

II. THE SECOND THEORY OF RESPONSE SET

Part of the questionnaire instructions ran:

> On the following pages you will find some statements about things that people say they like to do. These statements describe certain tendencies, preferences or 'traits'. You are to make a judgment of how desirable or undesirable you think each trait would be in other people. (Trait Rating Form, p. 2; see Appendix)

Hebb (1960) states that ". . . the mental processes of self perception are the same processes, in large part, that constitute the perception of another person." (1960, p. 742). Desoto et al (1959) in their research (quoted earlier in the thesis) suggest that social desirability is really personal desirability. In such

circumstances the present general factor of social desirability might be a product of a factor or syndrome isolated from factorial studies of personality, and the oblimax factors might then represent traits associated with that factor (Eysenck, 1953, p. 13, develops such a model, for example).

To this end an attempt was made to describe in psychological terms the oblimax factors for Grade XII boys (since they exhibited the largest general factor of the six grade and sex groups). The first factor appeared to resemble a sociability factor (with positive loadings on 'To like to say things that are regarded as witty and clever by other people', 'To like to participate in fads and fashions', and a negative loading on 'To like to analyze your own motive and feelings'). The second factor resembled Davis's (1952, p. 20, pp. 31-32) Socialized Anxiety inverted (with positive loadings on 'To like to read books and plays in which sex plays a major part' and 'To like to listen to or tell jokes in which sex plays a major part', and negative loadings on 'To like to put in long hours of work without being distracted' and 'To like to stay up late in order to get a job done'). The third factor was interpreted as Dominance-Submission or Ascendance (with a positive loading on 'To like to argue for your point of

view when it is attacked by others', and a negative loading on 'To like to have friends who sympathize with you and try to cheer you up when you are depressed'). Factor four was interpreted as control (with positive loadings on 'To like to come and go as you want' and 'To like to have your meals organized and a definite time set aside for eating'). Factors five and six were interpreted with diminishing confidence as Impulsivity and Liking for Change, and the seventh factor was unidentifiable. These factors resemble some of the components of extroversion- introversion collated by Carrigan (1960, pp. 336-338) and from this it might be inferred that the psychological basis of the general factor of social desirability is extroversion.

If this analysis is correct, certain predictions logically arise and must be verified in order to establish the analysis: firstly, males must be significantly more extroverted than females because they consistently contribute more to the total variance of the general factor, a point substantiated by data cited by Carrigan (1960, p. 334). The second prediction is that a significantly large proportion of each of the present grade and sex groups consists of extroverts, a point on which Saunders (1961) has provided evidence by reporting that

the ratio of extroverts to introverts, as measured by responses to the Myers-Briggs test, is about three to one. Finally, a third prediction is that a second-order factor analysis of the intercorrelations among the primary factors for Grade XII boys will yield two factors identical with Carrigan's two main components of extroversion, Social Extroversion and Impulsivity versus Self-Control. The oblimax factors were intercorrelated and the unrotated loadings, derived by Hotelling's Method of Principal Components, were rotated graphically to simple structure. The Tables of intercorrelations of oblimax factors and the rotated loadings appear on the two following pages. Factor Two resembles Carrigan's Impulsivity versus Self-Control, but the interpretation of Factor One is less certain.

While the evidence for suggesting that the major component of the general factor of social desirability is extroversion is by no means conclusive on the basis of the present study, it is lent support by the findings of Couch and Keniston (1960) to the effect that 'yeasayers' are characterized by extroverted impulsivity.

The major defect of this theory is that it does not logically predict the effect on a general factor of

TABLE XI

PRIMARY FACTOR CORRELATIONS FOR THE GRADE XII BOYS

Factor \ Factor	1	2	3	4	5	6
1	-					
2	- 0.226	-				
3	- 0.491	0.506	-			
4	0.413	- 0.431	- 0.468	-		
5	0.236	0.132	- 0.084	0.451	-	
6	- 0.531	0.168	0.509	- 0.828	- 0.472	-
7	- 0.189	- 0.042	0.265	- 0.676	- 0.516	0.776

TABLE XII

ROTATED FACTOR LOADINGS DERIVED FROM A SECOND-ORDER ANALYSIS OF THE PRIMARY FACTOR INTERCORRELATIONS

(Loadings below |± 0.400| are omitted)

	Factor 1		Factor 2
1	- 0.576	Sociability	-
2	0.653	Socialized Anxiety Inverted	-
3	0.762	Dominance-Submission	-
4	- 0.782	Control	0.477
5	-	Liking for Change	0.590
6	0.706	Impulsivity	- 0.644
7	-	(Unknown)	- 0.773

social desirability of changes in age, intelligence or the rural-urban composition of the sampled individuals. It also runs counter to the first theory if Eysenck's (1954) correlation between extroversion and 'Tough-mindedness' (1954, p. 266) is accurate.

Whatever the explanation of the psychometric findings of this thesis, these findings still provide some justification for Edwards' (1957) assumption, untested by him at the time, that social desirability is unidimensional.

CHAPTER VI

CONCLUSIONS

1. A general factor of social desirability can be extracted from the intercorrelations of ratings of trait statements for social desirability by a sample of rural high school students.

2. This factor becomes increasingly general with increasing age, a finding which may not be independent of increasing intelligence as a result of differential drop outs in the school system.

3. Sex differences appear; males tend to be more consistent in their ratings than do females and hence contribute more to a general factor of social desirability at all grade levels studied.

4. A quantitative analysis of the oblimax factors suggest that while 'points of view' about social desirability could be established for each grade and sex group, no apparent trends in development or relations between these 'points of view' could be detected. A comparison of a similar nature with Messick's (1960) 'points of view' demonstrated the lack of overlap between the two sets of 'points of view'.

The conclusion is that 'points of view' about social desirability are not stable or developmental but merely statistical artefacts which do little to structure the social desirability dimension.

RECOMMENDATIONS FOR FURTHER STUDY

Future research into the nature of social desirability might be directed to a developmental study of social desirability in which the effects of intelligence have been controlled. A comparative study into the possible differences between rural and urban groups would clarify certain of the implications arising from the present study.

More significantly, however, would be research into the area of the suggested theories of response set. A factor analytic study using a large adult (college) sample should yield interesting results particularly toward more accurately defining the underlying components of a general factor of social desirability.

APPENDIX

TRAIT RATING FORM

NAME: ____

AGE: ____________________ SEX: ____________________

TRAIT RATING FORM

On the following pages you will find some statements about things that people say they like to do. These statements describe certain tendencies, preferences, or "traits." You are to make a judgment of how desirable or undesirable you think each trait would be in <u>other people</u>.

You should indicate your judgment by placing a check mark in one of the nine boxes to the right of each statement. These boxes represent different degrees of desirability, as indicated by the labels at the top.

For example, in the sample below someone has indicated his estimate of the desirability or undesirability of three traits as follows:

	UNDESIRABLE						DESIRABLE		
	Extremely	Strongly	Moderately	Mildly	Neutral	Mildly	Moderately	Strongly	Extremely
1. To like to punish your enemies.	☐	☑	☐	☐	☐	☐	☐	☐	☐
2. To like to read psychological novels.	☐	☐	☐	☐	☑	☐	☐	☐	☐
3. To like to make excuses for your friends.	☐	☐	☐	☐	☐	☐	☑	☐	☐

The person who made these judgments believes that "to like to punish your enemies" is a strongly undesirable trait in others, "to like to read psychological novels" is neither particularly desirable nor undesirable, and "to like to make excuses for your friends" is a moderately desirable trait in other people. You might feel otherwise and might wish to make check marks in different boxes.

Indicate in the same manner your own judgments of the desirability or undesirability of the traits which appear on the following pages. <u>Remember that you are to judge the traits in terms of whether you consider them desirable or undesirable in others.</u> Do not skip any items. Be sure to make a judgment about each trait.

DO NOT STOP. GO ON TO THE NEXT PAGE.

	UNDESIRABLE					DESIRABLE			
	Extremely	Strongly	Moderately	Mildly	Neutral	Mildly	Moderately	Strongly	Extremely
1. To like to do your very best in whatever you undertake.	☐	☐	☐	☐	☐	☐	☐	☐	☐
2. To like to move about the country and to live in different places.	☐	☐	☐	☐	☐	☐	☐	☐	☐
3. To like to put yourself in someone else's place and to imagine how you would feel in the same situation.	☐	☐	☐	☐	☐	☐	☐	☐	☐
4. To like to listen to or to tell jokes in which sex plays a major part.	☐	☐	☐	☐	☐	☐	☐	☐	☐
5. To like to have friends who sympathize with you and try to cheer you up when you are depressed.	☐	☐	☐	☐	☐	☐	☐	☐	☐
6. To like to criticize people who are in a position of authority.	☐	☐	☐	☐	☐	☐	☐	☐	☐
7. To like to find out what great men have thought about various problems in which you are interested.	☐	☐	☐	☐	☐	☐	☐	☐	☐
8. To like to be able to persuade and influence others to do what you want.	☐	☐	☐	☐	☐	☐	☐	☐	☐
9. To like to say things that are regarded as witty and clever by other people.	☐	☐	☐	☐	☐	☐	☐	☐	☐
10. To like to attack points of view that are contrary to yours.	☐	☐	☐	☐	☐	☐	☐	☐	☐
11. To like to show a great deal of affection toward your friends.	☐	☐	☐	☐	☐	☐	☐	☐	☐
12. To feel guilty whenever you've done something you know is wrong.	☐	☐	☐	☐	☐	☐	☐	☐	☐
13. To like to be able to come and go as you want to.	☐	☐	☐	☐	☐	☐	☐	☐	☐
14. To like to participate in discussions about sex and sexual activities.	☐	☐	☐	☐	☐	☐	☐	☐	☐
15. To like to supervise and to direct the actions of other people whenever you can.	☐	☐	☐	☐	☐	☐	☐	☐	☐

DO NOT STOP. GO ON TO THE NEXT PAGE.

		UNDESIRABLE						DESIRABLE		
		Extremely	Strongly	Moderately	Mildly	Neutral	Mildly	Moderately	Strongly	Extremely
16.	To like to try new and different jobs -- rather than to continue doing the same old things.	☐	☐	☐	☐	☐	☐	☐	☐	☐
17.	To like to treat other people with kindness and sympathy.	☐	☐	☐	☐	☐	☐	☐	☐	☐
18.	To like to use words which other people often do not know the meaning of.	☐	☐	☐	☐	☐	☐	☐	☐	☐
19.	To like to judge people by why they do something -- not by what they actually do.	☐	☐	☐	☐	☐	☐	☐	☐	☐
20.	To like to have your life so arranged that it runs smoothly and without much change in plans.	☐	☐	☐	☐	☐	☐	☐	☐	☐
21.	To like to be able to do things better than other people can.	☐	☐	☐	☐	☐	☐	☐	☐	☐
22.	To like to put in long hours of work without being distracted.	☐	☐	☐	☐	☐	☐	☐	☐	☐
23.	To like to give in and avoid a fight, rather than try to have your own way.	☐	☐	☐	☐	☐	☐	☐	☐	☐
24.	To like to do things that other people regard as unconventional.	☐	☐	☐	☐	☐	☐	☐	☐	☐
25.	To like to analyze your own motives and feelings.	☐	☐	☐	☐	☐	☐	☐	☐	☐
26.	To like to tell other people what you think of them.	☐	☐	☐	☐	☐	☐	☐	☐	☐
27.	To like to have strong attachments with your friends.	☐	☐	☐	☐	☐	☐	☐	☐	☐
28.	To like to have your meals organized and a definite time set aside for eating.	☐	☐	☐	☐	☐	☐	☐	☐	☐

DO NOT STOP. GO ON TO THE NEXT PAGE

	UNDESIRABLE					DESIRABLE			
	Extremely	Strongly	Moderately	Mildly	Neutral	Mildly	Moderately	Strongly	Extremely
29. To feel timid in the presence of other people you regard as your superiors.	☐	☐	☐	☐	☐	☐	☐	☐	☐
30. To like to argue for your point of view when it is attacked by others.	☐	☐	☐	☐	☐	☐	☐	☐	☐
31. To like to be the center of attention in a group.	☐	☐	☐	☐	☐	☐	☐	☐	☐
32. To like to make fun of people who do things you regard as stupid.	☐	☐	☐	☐	☐	☐	☐	☐	☐
33. To like to be appointed or elected chairman of a committee on which you are serving.	☐	☐	☐	☐	☐	☐	☐	☐	☐
34. To like to have your friends make a fuss over you when you are hurt or sick.	☐	☐	☐	☐	☐	☐	☐	☐	☐
35. To like to tell other people off when you disagree with them.	☐	☐	☐	☐	☐	☐	☐	☐	☐
36. To like to write a great novel or play.	☐	☐	☐	☐	☐	☐	☐	☐	☐
37. To like to stay up late working in order to get a job done.	☐	☐	☐	☐	☐	☐	☐	☐	☐
38. To like to have friends confide in you and tell you their troubles.	☐	☐	☐	☐	☐	☐	☐	☐	☐
39. To like to go out with attractive persons of the opposite sex.	☐	☐	☐	☐	☐	☐	☐	☐	☐
40. To like to conform to custom and to avoid doing things that people you respect might consider unconventional.	☐	☐	☐	☐	☐	☐	☐	☐	☐
41. To like to criticize someone publicly when they deserve it.	☐	☐	☐	☐	☐	☐	☐	☐	☐
42. To like to participate in new fads and fashions.	☐	☐	☐	☐	☐	☐	☐	☐	☐
43. To like to plan and organize the details of any work that you have to undertake.	☐	☐	☐	☐	☐	☐	☐	☐	☐

DO NOT STOP. GO ON TO THE NEXT PAGE.

	UNDESIRABLE								DESIRABLE
	Extremely	Strongly	Moderately	Mildly	Neutral	Mildly	Moderately	Strongly	Extremely
44. To like to kiss attractive persons of the opposite sex.	☐	☐	☐	☐	☐	☐	☐	☐	☐
45. To like to ask questions which you know no one will be able to answer.	☐	☐	☐	☐	☐	☐	☐	☐	☐
46. To like to have friends who feel sorry for you when you are sick.	☐	☐	☐	☐	☐	☐	☐	☐	☐
47. To like to be in groups where someone else takes the lead in deciding what you are going to do.	☐	☐	☐	☐	☐	☐	☐	☐	☐
48. To like to complete a single job or task at a time before taking on others.	☐	☐	☐	☐	☐	☐	☐	☐	☐
49. To like to travel and to see the country.	☐	☐	☐	☐	☐	☐	☐	☐	☐
50. To like to write letters to your friends.	☐	☐	☐	☐	☐	☐	☐	☐	☐
51. To like to read books and plays in which sex plays a major part.	☐	☐	☐	☐	☐	☐	☐	☐	☐
52. To like to do things in your own way and without regard to what others may think.	☐	☐	☐	☐	☐	☐	☐	☐	☐
53. To like to do things sometimes just to see what effect it will have on others.	☐	☐	☐	☐	☐	☐	☐	☐	☐
54. To like to be loyal to your friends.	☐	☐	☐	☐	☐	☐	☐	☐	☐

REFERENCES

Anderson, C. C. (1961a) A developmental study of dogmatism during adolescence with particular reference to sex differences. Unpublished manuscript.

Anderson, C. C. (1961b) A developmental study of moralistic attitudes during adolescence. Unpublished manuscript.

Borislow, B. (1958) The Edwards Personal Preference Schedule and fakability. _J. appl. Psychol._, 42, 22-27.

Carrigan, Patricia M. (1960) Extroversion-introversion as a dimension of personality: a reappraisal. _Psychol. Bull._, 57,329-360.

Corah, N. L., Feldman, M. J., Cohen, I. S., Gruen, W., Meadow, A. & Ringwall, E. A. (1958) Social desirability as a variable in the Edwards Personal Preference Schedule. _J. consult. Psychol._, 22, 70-72.

Couch, A. & Keniston, K. (1960) Yeasayers and naysayers: agreeing response set as a personality variable. _J. abnorm. soc. Psychol._, 60, 151-174.

Cowen, E. L., Budin, W. & Budin, F. A. (1961) The social desirability of trait descriptive terms: a variation of instructional set. _J. soc. Psychol._, 53, 317-323.

Cronbach, L. J. (1950) Further evidence on response sets and test design. _Educ. psychol. Measmt_, 10, 3-31.

Davis, A. (1952) _Social Class Influence Upon Learning_. Cambridge: Harvard University Press.

Davis, A. (1956) The ego and status-anxiety. In White, L. D. (Ed.) _The State of the Social Sciences_. Chicago: University of Chicago Press.

Desirability ratings of personality items show individual differences. ETS Developments, 8, April, 1960.

Desoto, C. B., Kuethe, J. L. & Bosley, J. J. (1959) A redefinition of social desirability. J. abnorm. soc. Psychol., 58, 273.

Dowan, E. & Adelson, T. (1958) The psychodynamics of social mobility in adolescent boys. J. abnorm. soc. Psychol., 56, 31-44.

Edwards, A. L. (1952) The scaling of stimuli by the method of successive intervals. J. appl. Psychol., 36, 118-122.

Edwards, A. L. (1953) The relationship between the judged desirability of a trait and the probability that the trait will be endorsed. J. appl. Psychol., 37, 90-93.

Edwards, A. L. (1955) Social desirability and Q sorts. J. consult. Psychol., 19, 462.

Edwards, A. L. (1957) The Social Desirability Variable in Personality Assessment and Research. New York: Dryden.

Edwards, A. L. (1959) Social desirability and the description of others. J. abnorm. soc. Psychol., 59, 434-436.

Eysenck, H. J. (1953) The Structure of Human Personality. London: Methuen.

Eysenck, H. J. (1954) The Psychology of Politics. London: Routledge and Kegan Paul.

Eysenck, H. J. (1959) Manual of the Maudsley Personality Inventory. London: University of London Press.

Feldman, M. J. & Corah, N. L. (1960) Social desirability and the forced-choice method. J. consult. Psychol., 24, 480-482.

Fordyce, W. E. (1956) Social desirability in the MMPI J. consult. Psychol., 20, 171-175.

Fruchter, B. (1954) Introduction to Factor Analysis. New York: D. Van Nostrand.

Goffman, E. (1959) The Presentation of Self in Everyday Life. Garden City, New York: Doubleday.

Guilford, J. P. (1954) Psychometric Methods. (2nd ed.) New York: McGraw-Hill.

Harman, H. H. (1960) Modern Factor Analysis. Chicago: University of Chicago Press.

Harper, R. J. C. (1961) The quantification of meaning in personality research. Doctoral dissertation, Univer. of Edinburgh.

Hebb, D. O. (1960) The American Revolution. Amer. Psychologist, 15, 735-745.

Kelleher, D. (1958) The social desirability factor in Edwards' PPS. J. consult. Psychol., 22, 100.

Kenny, D. T. (1956) The influence of social desirability on discrepancy measures between real self and ideal self. J. consult. Psychol., 20, 315-318.

Kenny, J. F. & Keeping, E. S. (1954) Mathematics of Statistics, Part I. (3rd ed.) New York: D. Van Nostrand.

Klett, C. J. (1957) Performance of high school students on the Edwards Personal Preference Schedule. J. consult. Psychol, 21, 68-72. (a)

Klett, C. J. (1957) The stability of social desirability scale values in the Edwards Personal Preference Schedule. J. consult. Psychol., 21, 183-185. (b)

Klett, C. J. (1957) The social desirability stereotype in a hospital population. J. consult. Psychol., 21, 419-421. (c)

Loevinger, Jane. (1958) A theory of test response. Proc. Invitational Conf. Testing Problems. Princeton: Educational Testing Service, 36-47.

Loevinger, Jane. (1959) Theory and techniques of assessment. Annu. Rev. Psychol., 10, 287-316.

Lovaas, O. I. (1956) Comparison of social desirability ratings between Norwegian and American college students. Personal communication. Cited by A. L. Edwards, The Social Desirability Variable in Personality Assessment and Research. New York: Dryden, 1957. P. 12.

McCandless, B. R. (1961) Children and Adolescents. New York: Holt, Rinehart and Winston.

Messick, S. (1960) Dimensions of social desirability. J. consult. Psychol., 24, 279-87.

Murray, H. A. (1943) Thematic Apperception Test Manual. Cambridge: Harvard University Press.

Navran, L. & Stauffacher, J. C. (1954) Social desirability as a factor in Edwards Personal Preference Schedule performance. J. consult. Psychol., 18, 442.

Rosen, E. (1956) Self-appraisal, personal desirability and perceived social desirability of personality traits. J. abnorm. soc. Psychol., 52, 151-158.

Sanford, N. (1956) The approach of the authoritarian personality. In McCary, J. L. (Editor), Psychology of Personality. New York: Grove Press.

Saunders, D. R. (1961) Personal communication.

Sheldon, M. S. (1959) Conditions affecting the fakability of teacher-selection inventories. Educ. psychol. Measmt, 19, 207-219.

Sherif, M. & Sherif, C. W. (1956) An Outline of Social Psychology. (2nd ed.) New York: Harper.

Silverman, R. E. (1957) The Edwards Personal Preference Schedule and social desirability. J. consult. Psychol., 21, 402-403.

Thompson, G. (1951) The Factorial Analysis of Human Ability. (5th ed.) London: University of London Press.

Titus, H. E. & Hollander, E. P. (1957) The California F scale in psychological research. Psychol. Bull., 54, 47-64.

Whyte, W. H. (1956) The Organization Man. New York: Simon and Schuster.

Wright, C. E. (1957) Relations between normative and ipsative measures of personality. Unpublished doctoral dissertation, Univer. of Washington. Cited by A. L. Edwards, The Social Desirability Variable in Personality Assessment and Research. New York: Dryden, 1957. P. 18.